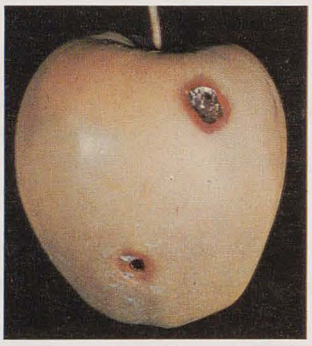
COMMON FRUIT INSECTS

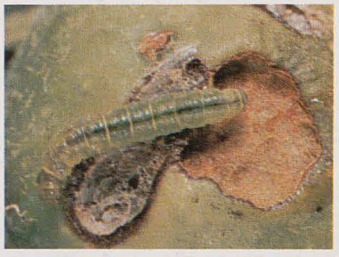
For safe and effective use of insecticides, always identify the problem correctly.

1. Codling moth adult and new larval entry, and damaged or "wormy" apple

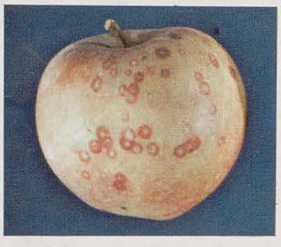

2. Apple maggot in apple, and blotching and streaking of maggot-infested fruit


5. Rosy apple aphid, and deformed fruit shown with normal apples for comparison

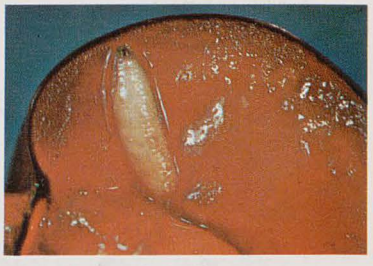


3. Red-banded leaf roller and damage

4. Green fruitworm



6. San Jose scale on apple

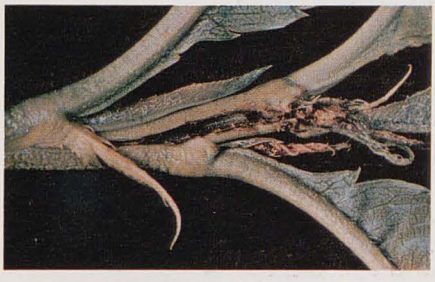


7. Cherry fruit fly maggot


8. Plum curculio adult and egg-laying slit on cherry, and curculio larva in plum

9. Two-spotted spider mite and eggs (enlarged). Not an insect.

10. Grape berry moth larva and damage




11. Oriental fruit moth. Twig damage and larva in peach.

12. Peach tree borer and pupa

Prepared by Extension Entomologists of the North Central States in cooperation with the Federal Extension Service, U.S. Department of Agriculture

University of Minnesota (1)
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Folder 248
Ext. (3)

COMMON FRUIT INSECTS

1. **CODLING MOTH,** *Carpocapsa pomonella* (Linnaeus). One of the most widespread pests of apples in the world, the adult lays her eggs on the fruit spurs, leaves, and twigs a short distance from the apple cluster. The newly hatched pinkish-white larvae migrate to and usually enter the young fruit at the blossom end leaving a collection of brown frass. Then they tunnel the core eating both seeds and fruit. Damage from codling moths has often been so severe that whole orchards have been abandoned.

2. **APPLE MAGGOT,** *Rhagoletis pomonella* (Walsh). Apple maggot is one of the major insect pests of apples in Minnesota. The adult flies emerge after petal fall from overwintering puparia in the soil. Some difficulty in chemical control results from prolonged emergence which begins in early July and may extend into August. The female deposits her eggs directly into the fruit. This egg puncture pits the apple skin. When the egg hatches, the larva burrows through the fleshy part of the fruit. Growth of larvae is often completed after the fruit has fallen to the ground. It is best to remove and destroy fallen fruit.

3. **RED-BANDED LEAF ROLLER,** *Argyrotaenia velutinana* (Walker). The leaf rollers seldom cause severe damage in Minnesota. When present, they characteristically web together groups of leaves for shelter. Newly formed apples contained within these shelters are partially eaten to form deep elongate russeted scars as the fruit matures. Initial feeding causes skeletonizing of the leaf near the mid-rib. When abundant, leaf rollers can defoliate a tree.

4. **GREEN FRUITWORM,** *Lithophane antennata* (Walker). As developing apples reach an inch in diameter, a fruit may be completely hollowed out or have one side eaten away. This feeding is usually restricted to a single fruit cluster. Such damage is caused by the green fruitworm or by closely related cutworms. If the fruit is not entirely destroyed it often is damaged so that it cannot be marketed. Fruitworms are not abundant in Minnesota.

5. **ROSY APPLE APHID,** *Anuraphis rosea* (Baker). After spending the summer on narrow leaved plantain, the winged aphid returns to apple trees in the fall. There a true female aphid is produced which mates and lays overwintering eggs. In the spring the newly hatched young feed on leaf buds eventually causing leaf curl. They also feed on developing fruits leading to disfiguration of the fruit skin.

6. **SAN JOSE SCALE,** *Aspidiotus perniciosus* Comstock. The adult female insect secretes and lives under a nipple-shaped waxy scale. The scales are usually distributed over the woody parts of the tree but may be on the fruit. Frequently a reddened halo appears around the scale on both twigs and fruit. Severely infested trees show decreased vigor, thinning foliage, yellowing leaves, and even die-back of branches. Although distributed throughout the United States, the San Jose scale is less of a problem in Minnesota than oystershell scale, *Lepidosaphes ulmi* (Linnaeus).

7. **CHERRY FRUIT FLY,** *Rhagoletis cingulata* (Loew). Cherries in the northern areas of the U.S. are subject to attack by this fly, which lays its eggs below the surface of the fruit skin. The larvae burrow into the flesh of the fruit causing them to be misshapen and undersized and they may turn red earlier than normal. A closely related species, the black cherry fruit fly, *R. fausta*, prefers sour to sweet cherries.

8. **PLUM CURCULIO,** *Conotrachelus nenuphar* (Herbst). One of the most destructive pests of stone fruits in Minnesota, it also causes considerable damage to apples and pears. The long-snouted, hump-backed beetles appear at blossom time. These beetles cut crescent shaped oviposition openings on the fruit causing either indentations, as on apples, or lumps, as on stone fruits. The larva develops within softer bodied fruits, such as plum.

9. **TWO-SPOTTED SPIDER MITE,** *Tetranychus telarius* (Linnaeus). The two-spotted spider mite is one of our more common mites and is found on nearly all ornamentals, flowers, and greenhouse plants, as well as on fruit trees. Feeding damage from light infestations first appears as pale patches on the leaves. Heavier infestations cause the entire leaf to become light colored, dry up, and turn a reddish brown. The under surfaces of the leaf will have a webby covering under which the adult mite feeds and lays eggs. Although called "red spider" their color can vary from almost colorless to yellow, red, green, or nearly black.

10. **GRAPE BERRY MOTH,** *Paralobesia viteana* (Clemens). The grape berry moth can be found wherever grapes are grown but is largely a problem in the northeastern United States. The larva webs the grape berries together causing them to turn purple and drop from the vine. In addition, small silken cocoons are spun holding together curled leaves and fruit clusters. The nearly ripened fruits which touch these webbed clusters, will have holes eaten in them. The moth attacks both wild and cultivated grapes.

11. **ORIENTAL FRUIT MOTH,** *Grapholitha molesta* (Busck). This moth is a major pest of growing peaches. The larva enters the fruit through the twig and stem. Thus external fruit injury is lacking, but post-harvest breakdown and brown rot results. The larvae are pinkish or creamy white in contrast to the brownish peach twig borer. Twig die-back is the initial indication of infestation by both species.

12. **PEACH TREE BORER,** *Sanninoidea exitiosa* (Say). The most important insect enemy of peaches is the peach tree borer. The larva tunnels beneath the bark of the tree from about 3" below ground level to one foot above. Bits of brown frass and sawdust, along with large amounts of gum, exude from the tunnel entrances. The whitish larvae, usually varying in size, will be seen if the bark is pulled away. Trees often die from the extensive feeding on the living tissues.

Current Cultural and Control Information

This color sheet is intended to assist the grower in correctly identifying the insect problem. The insects and their damage are similar from year to year but control measures change. To keep up-to-date with recommended controls, the grower or home owner should send for:

Fact Sheet No. 20 — The Apple Maggot
Fact Sheet No. 21 — Cankerworms
Pamphlet No. 184 — Home Fruit Spray Guide
Special Report 6 — Weed, Insect, and Disease Control Guide for Commercial Fruit Growers
Fact Sheet No. 4 — Cedar-Apple Rust
Fact Sheet No. 7 — Fire Blight
Bulletin 255 — Fruit for the Home

Single copies of these publications which are revised periodically, may be obtained by Minnesota residents, free of charge, from their local county extension office, or from the Bulletin Room, Institute of Agriculture, University of Minnesota, St. Paul, Minnesota 55101.

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